

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A catheter ~~(5)~~ apparatus for the therapeutic embolization of aneurysms, the catheter apparatus comprising:

a catheter configured to inject ~~(1) by injection of~~ a filling material ~~(2)~~ into the aneurysm;

~~(1) by way of an active locator (3) for the determination of~~ the configured to determine a spatial position and/or orientation of the catheter ~~(5);~~

a pump configured to controllably supply filling material to the catheter; and

a monitor connected to the active locator and the pump,
wherein the monitor is configured to detect emergence of the catheter from the aneurysm during the injection of the filling material into the aneurysm, and configured to stop the supply of the filling material in response to the detected emergence.

2. (Currently amended) ~~A~~ The catheter ~~(5)~~ apparatus as claimed in claim 1, ~~characterized in that~~ wherein the active locator ~~(3)~~ comprises a magnetic field sensor.

3-4. (Canceled)

5. (Currently amended) An apparatus for the therapeutic embolization of aneurysms ~~(1)~~, the apparatus comprising:

a catheter ~~(5)~~ for injecting a filling material ~~(2)~~ into an aneurysm ~~(1)~~;

a locating device ~~(8, 9)~~ and at least one active locator ~~(3)~~ fitted on the catheter ~~(5)~~, ~~it being possible for the~~ locating device determining a spatial position and/or orientation of the locator ~~to be determined by the locating device~~ ~~(8, 9)~~;

a pump device ~~(6)~~ for controllably supplying filling material ~~(2)~~ to the catheter ~~(5)~~; and

a monitoring unit ~~(7)~~ connected to the locating device ~~(8)~~ and the pump device ~~(6)~~,

~~which~~ wherein the monitoring unit is designed operative to detect emergence of the catheter from the aneurysm during the injection of ~~plugging the~~ filling material ~~(2)~~ into the aneurysm ~~(1)~~, and thereupon ~~to stop~~ stopping the supply of the filling

~~plugging~~ material.

6. (Currently amended) ~~An~~ The apparatus as claimed in claim 5, ~~characterized in that wherein~~ the monitoring unit ~~(7) contains~~ comprises a memory with a road map stored therein, and ~~in that it is designed to record~~ records the measured position of the locator ~~(3) using~~ the road map.

7. (Currently amended) ~~An~~ The apparatus as claimed in claim 5, ~~characterized in that it comprises an imaging device such as in particular further comprising~~ an X-ray device.

8. (Currently amended) ~~An~~ The apparatus as claimed in claim 5, ~~characterized in that wherein~~ the locating device ~~(8, 9) is~~ determined the position and/or orientation of the active locator ~~(3) by means by~~ at least one of a mechanical, electromagnetic, optical ~~and/or~~ acoustic method.

9. (Currently amended) ~~An~~ The apparatus as claimed in claim 8, ~~characterized in that wherein~~ the active locator ~~is~~ comprises a magnetic field sensor ~~(3) and~~ the locating device ~~contains~~ comprises a field generator ~~(9) for~~ generating an electromagnetic

field which is spatially and/or temporally inhomogeneous.

10. (Currently amended) ~~An~~ The apparatus as claimed in claim 5, ~~characterized in that the plugging material (2) comprises~~ wherein the filling material is selected from at least one of a curable polymer material, plastic beads, a plastic coil, a hydrogel ~~and/or~~ a fibrin sponge.

11. (Currently amended) A method of controlling the supply of a plugging material ~~(2)~~ to a catheter (5) ~~during~~ employed in the therapeutic embolization of an aneurysm ~~(1)~~, the method comprising the ~~steps~~ acts of:

a) ~~determining the position and/or orientation of the catheter via an active locator (3)~~ fitted thereon;

b) ~~automatically stopping the supply of the plugging material (2) to the catheter (5) if emergence of the catheter from the aneurysm (1) is detected.~~

12. (Currently amended) ~~A~~ The method as claimed in claim 11, ~~characterized in that~~ wherein the position of the locator ~~(3)~~ is recorded using a road map generated beforehand.

13. (Currently amended) ~~A~~ The method as claimed in claim 11,
~~characterized in that wherein~~ the catheter (5) and the aneurysm (1)
are imaged together at the start of embolization, ~~preferably by~~
~~means at least one of X-rays or with and/or~~ administration of a
contrast agent.

14. (Currently amended) ~~A~~ The method as claimed in claim 11,
~~characterized in that the~~ further comprising the act of navigation
of the catheter (5) in the vascular system outside the aneurysm,
the act of navigation (1) is being assisted by determining the
position of the active locator ~~(3)~~.